



GRAIP_Lite

A Streamlined Tool for Modeling Road Sediment Impacts

GRAIP_Lite is a GIS tool for predicting road sediment impacts on streams using easily available corporate data. GRAIP_Lite is suitable for analyzing management activities impacting roads, prioritization of restoration and forest planning. Minimum input requirements are a GIS road layer and a digital elevation model.

What does GRAIP_Lite do?

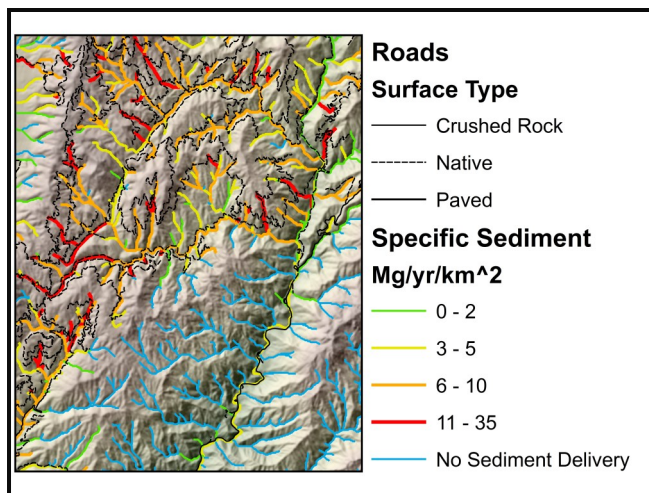
- Predicts average annual road surface sediment production based on an erosion base rate, road length, slope, road surfacing and vegetation cover, much like the GRAIP model.
- Predicts sediment delivery to streams based on locally calibrated sediment delivery curves.
- Predicts road sediment accumulation through the channel network to visualize streams with greater road sediment influence.
- Provides standardized maps and outputs for easy comparison of management alternatives.

Utilities

- Simple tools for predicting the effects of changing road use associated with management activities.
- Tool for input and assessment of multiple management alternatives that impact road use or extent.
- Ideal tool for forest and project scale planning and for prioritizing road restoration work.



Stream impacted by road sediment



GRAIP_Lite road sediment delivery predictions to streams

What are the Inputs?

- GRAIP_Lite uses USFS INFRA or existing road GIS information and a DEM.
- Local base erosion rate, geologic derived base rate, or default rate.
- Sediment delivery and vegetation calibrations built in with local calibration options.
- Road map with planned treatment alternatives.
- Requires ArcGIS 10.3 or greater and ArcHydro toolbox.

[www.fs.fed.us.GRAIP/GRAIP_Lite](http://www.fs.fed.us/GRAIP/GRAIP_Lite)